1878. Carbon Rheostat (NS-78-003)

Numbered pages 1-16 precede all other notes and drawings. These pages were copied by William Carman into Experimental Researches, Vol. 4, pages 270-283.

Carbon Resistance

Aug. 15th 1879

Personally appeared before me this day of 18 , the said Thos. A. Edison, Chas. Batchelor, John Krusi, and Martin Force, and acknowledged the above to be their signatures

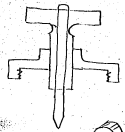
Notary Public.

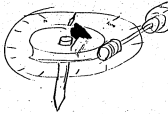
Chas Batchelor

J Krusi

T A Edison

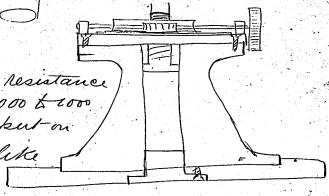
Martin Force



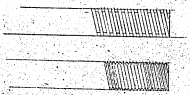


Personally appeared before me this day of 18 , the said Thos. A. Edison, Chas. Batchelor, John Krusi, and Martin Force, and acknowledged the above to be their signatures

Notary Public.



In order to make a resistance box to go from 10,000 to 1000 it is necessary to put on dial arrangement like sample



Carbon Rheostat Aug. 16th 1888

J. Krusi

T. A. Edison

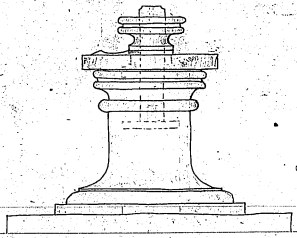
Chas. Batchelor

Martin N. Force

Personally appeared before me this day of 18 , the said Chas. A. Edison, Chas. Batchelor, John Krusi, and Martin Force, and acknowledged the above to be their signature

Notary Public.

Exhibit on page 271 vol 4 Decisions Com. of Pat.



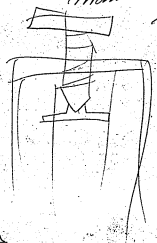
Carbon Rheostat Aug. 16th 1878. 3

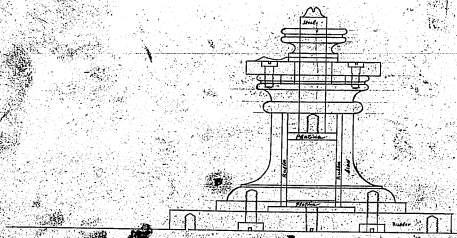
J. Kruesi

Chas Batchelor

T. A. Edison

Martin Force





Personally appeared before me this 10 day of Oct. 1878 Chas. Batchelor, John Kruesi, and Martin Force, and acknowledged the above to be their signatures

Notary Public.

Entered in Book 271 Vol 4 Ent Records Oct 16. 1878 [illegible]

Personally appeared before me this day of 18 , the said Thos. A. Edison, Chas. Batchelor, John Krousl, and Martin Force, and acknowledged the above to be their signature

Notary Public.

T A Edison

Fractional Rheostat

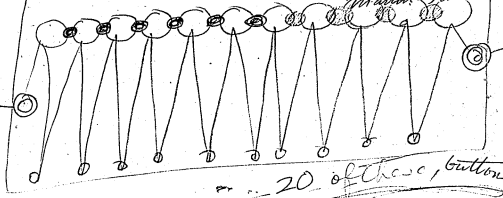
Shunt for Fractional Balancing Motor Galvanometer

Aug 26 1878

Chas Batchelor

Martin Force

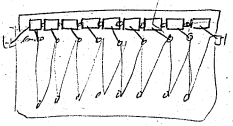
Copied from Page 272 Vol 4 Book Records Dec 16, 1878 170 Commas



20 of these, Buttons

Personally appeared before me this day of 18 , the said Thos. A. Edison, Chas. Batchelor, John Krousl, and Martin Force, and acknowledged the above to be their signature

Notary Public.



Shunt Shunt Shunt

Battery Battery Battery Battery Battery Battery Battery

Aug. 27th 1898

Johnson 5

Chas A Batchelor

T A Edison

Martin Dowd

Personally appeared before me this day of
19 , the said Thos. A. Edison,
Chas. Batchelor, & Martin Dowd
and acknowledged the above to be their signatures

Notary Public

Original Fig

Incandescent Electrical Conductor

Patented Dec 2, 1913 Ser. 1 Ser. Number
May 16, 1898
Edison

15

T. A. EDISON.

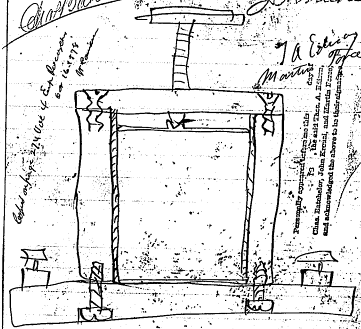
Aug 31st 1878

Carbon Rheostate

Menlo Park, N. J., 187

Chas Batchelor

J Kruesi



Copied on page 274 Vol 4 Exp Records 6 or 16-3-78

T A Edison

Martin Force

Personally appeared before me this day of 19 , the said Thos. A. Edison, Chas. Batchelor, John Kruesi, and Martin Force and acknowledged the above to be their signature.

Notary Public.

Personally appeared before me this day of 19 , the said Thos. A. Edison, Chas. Batchelor, John Kruesi, and Martin Force and acknowledged the above to be their signature.

Notary Public.

Edisons Carbon Resistance. Sept 4th 1894

Chas Batchelor
Jardeen
Martin Force
Collaus

135 Unmagnetized Iron. ~~Test on Martin Force Collaus~~

These tests taken on 1 cell Collaus on 1 pot.

135 Discs Deflec. 9 1340 ohms
135 — Deflec. 40 120 ohms } Screw moved down 26.

J Shmidt

1/2 { 67 Discs. Deflec. 3 — 3760 ohms
Deflec. 46 — 60 ohms

Personally appeared before me this day of 19 , the said Thos. A. Edison, Chas. Batchelor, John Ernest, and Martin Force, and acknowledged the above to be their signature

Notary Public.

3/4 { 101 Discs Deflec 3 3760
Deflec 42. 90 ohms

Quad
Carbon Rheostat

1/4 { 34 Discs Deflec 3 3760 ohms.
Deflec 30 ohms.

34 Discs
Same with 3 c

4960 ohms
37 ohms.

9520
920

The one cell tests are probably unreliable owing to slight deflection

67 Discs Deflect 7. 5600 ohms 420
" 64 67 ohms 9890

Rechecked 8-7-94 52 H Carbon Rheostat
Oct 21. 1894 McCarney

107 Discs. Deflect 67. 107 ohms 5600
4950
650.

5½ 6706.

5600
6706
7000
1106.

Edison Carbon Lead Resistance

Feb 24 1898

Taken
Chas Batchelor
Witness

Want it test 17 with pressure

Discs used last night No 3 coil Bell Callan

Deflect 1½ with pressure 34 Martin Force

Make solution that will give ½ this
and try it

Water 4 oz
Dextrine 1 oz
Plumbago ½ oz

This test
X 46

Water 4 oz
Dextrine 1½
Plumbago ½ oz

This tests
1½ - 22

Water 4 oz
Dextrine 1 lb 15 dwt
Plumbago ½ oz

This tests
22 - This was rubbed off a little more than the last

Water 4 oz
Dextrine 2 oz
Plumbago ½ oz

This test
18

Contained from page 77 Vol 4 Notebook
Oct 31, 1887
Chas Batchelor

46
22

Personally appeared before me this day of 19
the within Chas. A. Batchelor, Chas. Stadtmiller, John Sorrel, and Martin Force
and acknowledged the above to be their signatures

Notary Pu

Edisons Carbon Lead Resistance Sept 6 1878

old | new | J Kruesi Chas Batchelor T A Edison Martin Force

old		new		Scraped
1 — 23		1 —	220 —	80 } 260
2 — 57		2 —	— —	140
3 — 33		3 —	—	97 / 32 64 +
4 — 17 +		4 —	— 33 —	206 +
5 — 17 +		5		
6 — 24		6 —	—	
7 — 54		7 —	—	
8 — 58		8 —	—	
9 — 24		9 —	—	
10 — 28		10 —	—	
11 — 18 +		11 —	—	
12 — 28		12 —	—	
13 — 28		13 —	—	
14 — 30		14 —	—	
15 — 28		15 —	—	
16 — 28		16 —	—	
17 — 28		17 —	—	
18 — 18		18 —	—	
19 — 20		19 —	—	
20 — 20		20 —	—	

20 / 584 (29 average ohms)

Personally appeared before me this day of 13, the said Thos. A. Edison, Chas. Batchelor, John Kruesi, and Martin Force, and acknowledged the above to be their signature

Notary Public

Copied on P 276 Vol. 4 Oct 21, 1878 M Carmen

Voltameter Sept 6 78

10 1/2 16 25 16 1/2 16 1/2 16 1/2 16 3/4 16 1/4 18 1/2 18 1/4 19 18 1/4 18 1/4 19 18 1/2 18 1/2 19 1/2 19 20 19 3/4 19 3/4 20 19 3/4 20 19 3/4 19 3/4 19 3/4 21 20 1/4 20 20 1/2 20 19 3/4 20 1/2 19 18 3/4

Practical Phonograph Sept 11th 1878

J. Krueger

Chas Batchelor

T A Edison

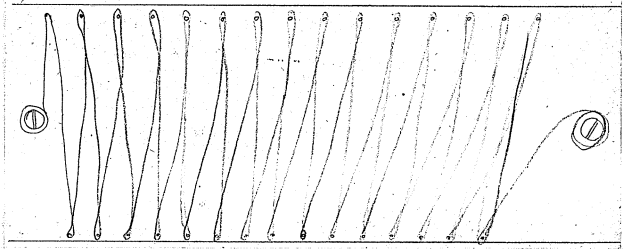
Martin Force

Personally appeared before me this day of 18 , the said Chas. A. Edison, Chas. Batchelor, John Krueger, and Martin Force, and acknowledged the above to be their signatures

Notary Public.

Personally appeared before me this day of 18 , the said Chas. A. Edison, Chas. Batchelor, John Krueger, and Martin Force, and acknowledged the above to be their signatures

Notary Public.



Copied on page 272 Vol 4 Exp Records
Rec 21.1878
M Cummings

a

a

Carbon Resistance for Sept 12 1878

Quadruplex Martin Pope J Kinnear T A Edison 11

Chas Batchelor

Geo E Barnaby

3 cells Grenet Battery Bradley Cable No 1 Cable

10 Plunger Relays 25/p under

	9	4160	Sener lamps 1/p cdn
	17 1/2	2,160	
75	4	9.170	" " 13 "
	15	2.500	
50	22	1.600	1/p cells Trapeze to fill 11 "
	48	450	
25	29	1153	2 1/2 lamps of Sener
	50	373	3 1/2 lamps of Edison

75	7 1/2	1730
		4170
	2 3/4	

Sent it for 3 3/4 [illegible]

Copies on P. 278 Doc 4 Ed Rec [illegible] Oct 21, 1878 [illegible]

Sept 13th 1878

22 = 16.40

Personally appeared before me this day of the said Chas. A. Batchelor, John Kinnear, and Martin Pope, and acknowledged the above to be their signatures

Notary Public.

Carbon Resistance for Quad Sept 13 1898

Personally appeared before me this day of 18 the said Chas. A. Edison, Chas. Batchelor, John Krecel, and Martin Force and acknowledged the above to be their signature.

Notary Public.

Chas A Batchelor

Geo E Emmons

Johnson

Morrison

Force

20 Cells Calland

75 discs of 2½ Plumbago ~~Paper~~ Cloth made from standard

10 AM Sept 13.

75 discs with pressure 75 deg. 1440 ohms

~~took out pressure~~ 62 deg 2840 ohms

tested on 3 coil —

75 discs with pressure 8 2/4 — 1440

4 4/4 — 2840

3 cells Calland on 1 coil again

75 discs with pressure 24½ 1540

without pressure 14 2870

~~24½~~

5 hours after

Lake test at 3 p.m.

3 pm Sept 14

24 hours after

on 3 cells calland	25 =	1540 ohms	24½ =	1440
	15½ =	2690	15½	2690
1 coil 20 cells calland	75	1440	74½	1400
	62	2720	63	2690
20 cells 3 coil	49	1400	49	1400
	~~45~~ 45	2670	45	2670

Entered on Page 119 Vol. 10 Dec. 21, 1898 W.M. Morrison

Personally appeared before me this day of 18 the said Chas. A. Edison, Chas. Batchelor, John Krecel, and Martin Force and acknowledged the above to be their signature.

Notary Public.

Carbon Chronotype for Quadruplex

Sept 14th 1878 13

Chas Batchelor

J A Edison

J Dunser

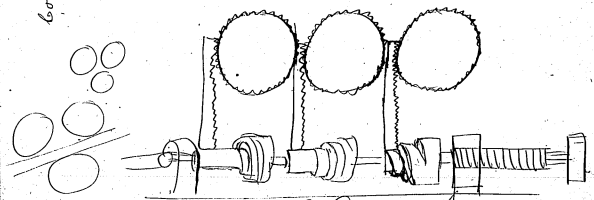
Witness Force

Witnesses Fritz

Personally appeared before me this 13 day of Sept. 1878 the said Chas. A. Batchelor, John Kessel, and Martin Force and acknowledged the above to be their signature

Notary Public

Entered on Page 280 Vol of Book Recorded 27 Sept 1878



Rack works by Cams so that each one goes its full distance before another commences and the last one starts back first

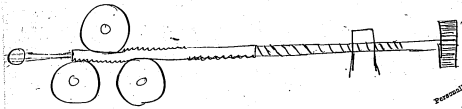
Carbon Rheostat for Quadruplex

Sept 14 1874

Chas Batchelor

J A Edison

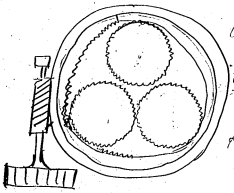
Martin Force



Personally appeared before me this 13 day of Aug 1875 Chas. Batchelor, John Ehrson, and Martin Force and acknowledged the above to be their signature

Notary Public.

3 cogs with pressure springs working inside an annular wheel provided with 1/3 cog which takes each wheel by itself & returns the same way.



Copied on Reg 8 Vol H Recd Oct 22 78

W McCann

Boston Resistance for Quadruplex

Sept 16th 1848

J A Adams 15
Chas Batchelor
H E Carrington
Martin Force
J Kneval

After taking out the 75 discs and pressing each one singly and then altogether with the Master

		with Pressure	without		
3 Cells Call	1 circ	39¾	790	17	2390
20 Cells Call	1 Circ	82¾	720 ohms	6½	2390
20 Cells Call	3 circ	18½	720	5	2390

Personally appeared before me this day 10 the said Thos. A. Kinnon, Chas. Batchelor, John Kneval, and Martin Force, and acknowledged the above to be their signature

Notary Public.

Sept 21 1848

100 Discs each pressed singly and then together

				with Pressure		without pressure	
3	Cells	1 circ		35	823	17	8090
			Sept 21st	35½	823	10½	4070
			" "	75½	770	49	3900
1 cell			" 22	75½	740	6½	2420
			" 23	38	760	14½	2690
3			" "	~~14½~~	~~2490~~		
			" "	37½	805	10½	4080
			" 25	37½	805	10½	4080
			" 26	30	1145	6	6630
			" "	30	1145	7	6100
125 Discs			" 27	31	1100	11½	3700

Chas Batchelor Carrington Martin Force

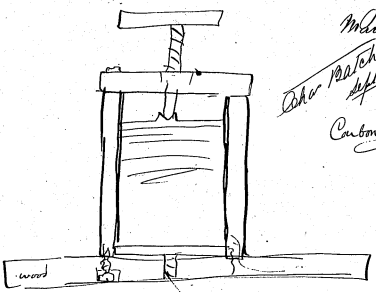
Speaking Telephone impressed with magnet of speech

No. 166

T A Edison
J Ennis
Martin Force

Chas Batchelor
Asst 28/10/75

Carbon Rheostat



Personally appeared before me this
day of
A.D. 1876, Thos. A. Edison,
Chas. Batchelor, John Ennis, and Martin Force,
and acknowledged the above to be their signatures

Notary Public.

Cashier on Rec. 24 2 Doc 6
Exp Recorder 06/27/71
M Bennett

Apparatus for Testing the resistance of Rubber Sept 19th 1878

Chas Batchelor

x weight one gramme

Carbon Resistance for Quadruplex

Sep 29 to 1878

D & C

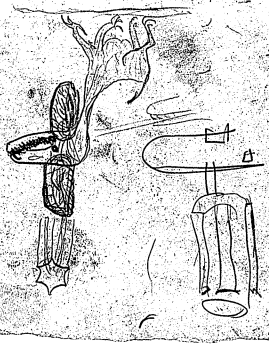
Chas Batchelor

G. E. Gilmore

M. M. Fox

Sep 29

125 Discs Each pressed simply and then together

3 cells Calc. 1 conc

	Without Pressure		With Pressure	
after standing Packed 22 hrs	30	11 20	13	3120
Sep 30. 9 am	30	11 20	10	2930
" 4 30 pm	31	10 60	11½	3490
" 5	30½	10 90	11	3610
" "	30	11 20	10½	3770
" "	30	11 20	10½	3770
Standing Pressed down with Oct 2.	31	10 10	13	2880
" 9 to 8 30	30	10 30	14	2920
" 11 " 11 30	30	10 00	9½	3390